LISTING OF THE CLAIMS:

1. (original) An apparatus for continuous casting of molten metals, the molten metal being continuously cast using a casting mold, said apparatus comprising:

electromagnets each comprising an iron core and a coil wound over said iron core, said electromagnets being arranged in a facing relation on opposite sides of said mold along a transverse width thereof to lie side by side along a longitudinal width of said mold; and

means for supplying a single-phase AC current to each coil.

2. (original) The apparatus according to claim 1, wherein said iron core comprises individual single iron cores separate from each other, or a comb-shaped iron core having a comb-teeth portion over which the coils are wound.

3. (original) The apparatus according to claim 1, wherein said iron core comprises a comb-shaped iron core having a comb-teeth portion over which said coils are wound and a root portion over which a second coil is wound, and further comprising a means for supplying a DC current to the second coil.

4. (original) An apparatus for continuous casting of molten metals, the molten metal being continuously cast using a casting mold, said apparatus comprising:

a coil supplied with a DC current for producing a DC magnetic field and a coil supplied with an AC current for producing a non-moving, vibrating magnetic field, both said coils being wound over each of common iron cores,

said iron cores being arranged around said mold such that a direction of the magnetic fields produced by said coils is aligned with a transverse width of said mold.

5. (original) The apparatus according to claim 4, wherein magnetic poles of said iron core are arranged in at least one pair to face each other above or/and below an ejection port of an immersion nozzle.

6. (withdrawn) A method for continuous casting of metals, comprising intermittently applying a static magnetic field in a thickness direction of a cast slab.

7. (withdrawn) The method according to claim 6, wherein said static magnetic field is intermittently applied under setting of an on-time t1 = 0.10 to 30 seconds and an off-time t0 = 0.10 to 30 seconds.

8. (withdrawn) The method according to claim 6, wherein said static magnetic field is applied to a surface of a molten metal.

9. (withdrawn) The method according to claim 7, wherein said static magnetic field is applied to a surface of a molten metal.

10. (original) An apparatus for continuous casting of molten metals, the molten metal being continuously cast using a casting mold, said apparatus comprising:

means for applying magnetic fields at positions above and below an ejection port of an immersion nozzle; and

a first coil for producing an AC magnetic field moving in a longitudinally symmetrical relation from opposite ends to a center of said mold along a longitudinal width thereof, and a second coil for producing a DC magnetic field, both said first and second coils being wound over each of common iron cores,

said iron cores being arranged on opposite sides of said mold along a transverse width thereof such that a direction of the magnetic fields produced by said coils is aligned with the transverse width of said mold.